

REMARKS

I. Introduction

In response to the pending Office Action, Applicants have cancelled claims 1-18, without prejudice, and added new claims 19-58. Support for new claim 19 may be found, for example, on page 9, line 13 to page 10, line 4 of the specification. Support for new claim 20 may be found, for example, in original claim 1. Support for new claim 21 may be found, for example, on page 11, line 13 to page 12, line 14 of the specification. Support for new claims 22-24 may be found, for example, in original claim 3. Support for new claims 25-27 may be found, for example, on page 14, lines 4-6 of the specification. Support for new claims 28-30 may be found, for example, in original claim 13. Support for new claim 31 may be found, for example, on page 14, lines 7-14 of the specification. Support for new claims 32-34 may be found, for example, in original claim 1. Support for new claims 35-37 may be found, for example, in original claim 4. Support for new claims 38-40 may be found, for example, in original claim 5. Support for new claims 41-43 may be found, for example, in original claim 7. Support for new claims 44-46 may be found, for example, in original claim 8. Support for new claims 47-49 may be found, for example, in original claim 14. Support for new claims 50-52 may be found, for example, in original claim 15. Support for new claims 53-55 may be found, for example, in original claim 16. Support for new claims 56-58 may be found, for example, in original claim 17. No new matter has been added.

Furthermore, the specification was amended to reflect the proper citing for the reference, Japanese Patent No. 2715778.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art.

II. The Rejection Of Claims 1-18 Under 35 U.S.C. § 103

Claims 1-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang et al. (USP No. 6,110,619) in view of Fujishita et al. (U.S. Pub. 2002/0027415). As claims 1-18 have been cancelled, the rejections are considered moot. Applicants submit that new claims 19-58 are patentable over the cited prior art for at least the following reasons.

With regard to the present invention, claims 19, 20 and 21 recite, in-part, an electrode active material for an electrochemical device, comprising compounds having a structure represented by the general formulae (1a), (1b) and (2), shown above, in the respective claims.

The Examiner alleges that while Zhang et al. fails to disclose the compounds of the present invention, Fujishita et al. teaches the use of the above disclosed compounds and the compound's capability of providing a long life to electrochemical devices. However, in contrast to the Examiner's allegations, Fujishita teaches an organic **electroluminescent** device in which the compounds are contained in the **hole-injecting layer** into which light is emitted by injecting an electron and a hole into an organic luminescent layer (see, paragraph [0002]). Thus, the compounds described in the present invention are NOT used in an **electrochemical** device, nor do they comprise the **electrode active material** of said electrochemical device.

Furthermore, Fujishita does not teach that the compounds are capable of providing a long life to *electrochemincal* devices, rather, they provide a material used in the organic layer sandwiched between the electrodes in an *electroluminescent* device (see, paragraph [0025]) having a high luminous efficiency and a long life (see, paragraph [0010]). The device disclosed in Fujishita is completely different from the device in Zhang, and uses the compounds of the

present invention, for an entirely different purpose. Thus, neither Zhang nor Fujishita disclose an electrode active material for an electrochemical device, comprising compounds having a structure represented by the general formulae (1a), (1b) and (2).

Moreover, claim 20 discloses nitrogen containing compounds, not a sulfur containing compound as disclosed in Fujishita. The compound (1b) of claim 20 of the present invention contains within the ring system, the substituent X, which may only be nitrogen, not sulfur. Thus, even if Zhang and Fujishita did disclose the compounds of the present invention used as electrode active materials in an electrochemical device, the two cited references clearly do not disclose a compound described in claim 20 of the present invention.

As is well known, in order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art, *In re Royka*, 180 USPQ 580 (CCPA1974), and as Zhang and Fujishita both fail to teach or suggest an electrode active material for an electrochemical device, comprising compounds having a structure represented by the general formulae (1a), (1b) and (2), it is submitted that Zhang and Fujishita, alone or in combination, do not render claims 19, 20 and 21, or any claims dependent thereon, obvious.

III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 19, 20 and 21 are patentable for

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the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

IV. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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